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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/004,116 | 11/02/2001 | Sundar Raman | 01-1015 | 8024 |

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| EXAMINER |
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AVELLINO, JOSEPH E

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| ART UNIT | PAPER NUMBER |
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2143

DATE MAILED: 01/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/004,116

Applicant(s)

RAMAN ET AL.

Examiner

Joseph E. Avellino

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2002/02/20
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-19 are presented for examination; claims 1, 6, 7, 10, 11, 13, 18, and 19 independent.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 4, and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 4 recites the limitation "the tracking delay", which lacks antecedent basis. For examination purposes, the term "tracking delay" will be construed as "the number of requests". Correction is required.
5. Claim 17 recites the limitation "the database" which lacks antecedent basis. For examination purposes, the database will be understood to be the control node. Correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9, 18, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Jordan et al. (USPN 6,438,652) (hereinafter Jordan).

7. Referring to claim 1, Jordan discloses a method of load balancing in an upstream proxy (i.e. load monitor 120) (col. 5, lines 40-65), the method comprising:

receiving information from a plurality of downstream proxies 150 (col. 6, lines 6-25);

maintaining a list of downstream proxies (Figure 2b, ref. 102 load table; col. 6, lines 10-15);

assigning a weight to each of the downstream proxies in the list, the weight based upon information received from the downstream proxies (col. 6, lines 6-25).

8. Referring to claim 2, Jordan discloses receiving a request and using the weights to assign a proxy (col. 6, lines 25-27).

9. Referring to claim 3, Jordan discloses the information is indicative of the traffic load on the downstream proxy (i.e. number of forwarded requests and number of direct requests (col. 6, lines 15-17).

10. Referring to claim 4, Jordan discloses the information is indicative of the tracking delay in the responses of the downstream proxy (col. 6, lines 15-17).

11. Referring to claim 5, Jordan discloses the load is determined by querying (i.e. probing) the processes of the downstream proxy (col. 6, lines 10-16).

12. Claims 6-9, 18, and 19 are rejected for similar reasons as stated above.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan in view of Zisapel et al. (USPN 6,665,702) (hereinafter Zisapel).

15. Referring to claim 10, Jordan discloses the invention substantively as described in claim 1. Jordan furthermore discloses sending a message to each of the proxies (i.e. probing) (col. 6, lines 10-15). Jordan does not disclose determining a response time for each of the messages sent to the proxies and assigning weights to each of the proxies based on the response time. In analogous art, Zisapel discloses another method of assigning weights to a group of proxies wherein a response time is determined for each of the messages sent to the proxies (i.e. polling request and results) (Figures 2D-2E) and assigning weights (i.e. network proximity) to each of the proxies based on the response time (col. 14, lines 40-63; col. 15, lines 8-25). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Zisapel with Jordan since Jordan teaches that the load of a cache server can be a weighted sum of requests (col. 6, lines 15-17), however does not state that it is required to be this and furthermore one of ordinary skill in the art would know that it is well known there are numerous other attributes and methods to determine load and weighting of a cache server. This would lead one of ordinary skill in the art to search for other methods as to how to determine the weighting of a server, eventually finding the system of Zisapel and its novel method of utilizing the proximities of the server farms based on

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polling methods to determine which would be the best server farm in order to service the request.

16. Claims 11 and 13 are rejected for similar reasons as stated above. Furthermore Zisapel discloses a location server directing the messages received by the control node to the proxies (Figure 2E, ref. 54).

17. Referring to claims 12 and 14, Jordan in view of Zisapel discloses the invention substantively as described in the claims above. Jordan in view of Zisapel do not disclose implementing the SIP protocol or using an INVITE message. However Jordan in view of Zisapel does disclose numerous polling methods in which to determine the proximities of the other servers (Zisapel: col. 4, lines 45-52). This would lead one of ordinary skill in the art to search other techniques in which to poll servers to elicit a response to determine the round trip time. It is also well known that the SIP INVITE message will elicit a response from a remote server to the sender (see SIP: Session Initiation Protocol, RFC 2543, p. 27, cited by Applicant in IDS). Therefore by this rationale it would have been obvious to one of ordinary skill to modify the system of Jordan in view of Zisapel in order to implement the SIP protocol to provide another polling technique since any one polling request might fail as supported by Zisapel (col. 15, lines 5-7).

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18. Referring to claim 15, Jordan in view of Zisapel disclose the invention substantively as described in claim 13. Jordan in view of Zisapel further disclose the information received by the control node from the proxies indicates a time delay (i.e. TTL value) (col. 14, line 64 to col. 15, line 7). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Zisapel with Jordan since Jordan teaches that the load of a cache server can be a weighted sum of requests (col. 6, lines 15-17), however does not state that it is required to be this and furthermore one of ordinary skill in the art would know that it is well known there are numerous other attributes and methods to determine load and weighting of a cache server. This would lead one of ordinary skill in the art to search for other methods as to how to determine the weighting of a server, eventually finding the system of Zisapel and its novel method of utilizing the proximities of the server farms based on polling methods to determine which would be the best server farm in order to service the request.

19. Claim 16 is rejected for similar reasons as stated above.

20. Referring to claim 17, Jordan discloses including a plurality of records (i.e. load table) (Figure 1b, ref. 120').

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
22. Aman et al. (USPN 6,249,800) discloses assigning session requests in a multi-server sysplex environment.
23. Scarpelli et al. (USPN 6,816,898) discloses interfacing external metrics into a performance management system.
24. Bhaskaran et al. (USPN 6,601,084) discloses dynamic load balancer for multiple network services.
25. Kawata et al. (US 2002/0032777) discloses load sharing apparatus and load estimation method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JEA

December 29, 2004



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SENIOR PATENT EXAMINER
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